AMENDMENTS TO THE CLAIMS

1. (Previously presented) A MOS-type power component in which each of the source, gate and drain regions constitutive of the component extend perpendicularly to a surface of a semiconductor chip substantially across an entire thickness of the semiconductor chip.

2. (Previously presented) The component of claim 1, wherein contacts with the source and drain regions are made by conductive fingers that extend substantially across the entire thickness of the semiconductor chip.

3. (Previously presented) The component of claim 2, wherein the conductive fingers are metal fingers.

4. (Previously presented) The component of claim 1, wherein junctions or limits between regions are arranged in planes perpendicular to a main chip surface.

5. (Previously presented) The component of claim 1, wherein junctions or limits between regions are formed of several cylinders perpendicular to a main chip surface.

6. (Previously presented) The MOS-type power component of claim 1, alternately comprising a source region of a first conductivity type, an intermediary region, and a drain region of the first conductivity type, each of these regions extending across the entire thickness of a substrate, the source and drain regions being contacted by conductive fingers or plates substantially crossing the substrate, insulated and spaced apart conductive fingers crossing from top to bottom the intermediary region, a horizontal distance between the insulated fingers being such that the intermediary region can be inverted when an appropriate voltage is applied to these insulated fingers.

7. (Previously presented) The MOS-type power component of claim 6, wherein the conductive fingers penetrate into lightly-doped N-type regions and are surrounded with heavily-doped N-type regions.

8. (Previously presented) The MOS-type power component of claim 1 comprising an IGBT transistor, the IGBT transistor comprising a source region of a first conductivity type, an intermediary region, a drain region of the first conductivity type, and an additional region of the second conductivity type, each of these regions extending across an entire substrate thickness, the source region and the additional region being contacted by conductive fingers or plates substantially crossing a substrate, insulated and spaced apart conductive fingers crossing from top to bottom the intermediary region, a horizontal region between the insulated fingers being such that the intermediary region can be inverted when an appropriate voltage is applied to these insulated fingers.

9. (Previously presented) The MOS-type power component of claim 6, wherein each of the conductive fingers is respectively connected to a source metallization, to a gate metallization, or to a drain metallization.

10. (Previously presented) The MOS-type power component of claim 6, wherein localized metallizations extend vertically between the source region and the intermediary region to form localized short-circuits.

11. (Previously presented) The MOS-type power component of claim 6, wherein the insulated and spaced apart conductive fingers are formed from conductive fingers crossing the entire thickness of the chip, the walls of which are oxidized and which are filled with doped polysilicon.

12. (Previously presented) The MOS-type power component or IGBT transistor of claim 8, wherein each of the conductive fingers is respectively connected to a source metallization, to a gate metallization, or to a drain metallization.

13. (Previously presented) The MOS-type power component or IGBT transistor of claim 8, wherein localized metallizations extend vertically between the source region and the intermediary region to form localized short-circuits.

14. (Previously presented) The MOS-type power component or IGBT transistor of claim 8, wherein the insulated and spaced apart conductive fingers are formed from conductive fingers crossing the entire thickness of the chip, the walls of which are oxidized and which are filled with doped polysilicon.

15. (Currently Amended) A MOS-type power component comprising:

a substrate;

semiconductor regions extending through the substrate; [[and]]

<u>a gate region that extends substantially through an entire thickness of the substrate; and</u>

contacts extending through the substrate and contacting the semiconductor regions within the substrate;

wherein the contacts are metal fingers.

16. (Canceled)

17. (Previously presented) The MOS-type power component of claim 15, wherein an interface between the semiconductor regions is arranged as a plane perpendicular to a surface of the substrate.

18. (Previously presented) The MOS-type power component of claim 15, wherein an interface between the semiconductor regions is arranged as a cylinder perpendicular to a surface of the substrate.

19. (Previously presented) The MOS-type power component of claim 15, further comprising:

a source region of a first conductivity type extending through the substrate;

an intermediary region extending through the substrate;

insulated conductive fingers extending through the intermediary region, a spacing between the insulated conductive fingers being such that the conductivity of the intermediary region can be altered when a voltage is applied to the insulated conductive fingers; and

a drain region of the first conductivity type extending through the substrate, the source and drain regions being contacted by at least one of the contacts.

20. (Previously presented) The MOS-type power component of claim 19, wherein the contacts contact heavily-doped N-type regions.

21. (Previously presented) The MOS-type power component of claim 15, wherein the MOS-type power component is an IGBT transistor, the IGBT transistor comprising:

a source region of a first conductivity type extending through the substrate being contacted by at least one of the contacts;

an intermediary region extending through the substrate;

a drain region of the first conductivity type extending through the substrate;

an additional region of the second conductivity type extending through the substrate and being contacted by at least one of the contacts; and

insulated conductive fingers extending through the intermediary region, a spacing between the insulated conductive fingers being such that the conductivity of the intermediary region can be altered when a voltage is applied to the insulated conductive fingers.

22. (Previously presented) The MOS-type power component of claim 19, wherein each of the contacts is respectively connected to a source metallization, a gate metallization, or a drain metallization.

23. (Previously presented) The MOS-type power component of claim 19, wherein localized metallizations extend vertically between the source region and the intermediary region to form localized short-circuits.

24. (Previously presented) The MOS-type power component of claim 19, wherein the insulated conductive fingers are formed at least partially of polysilicon and are insulated by an oxide layer.

25. (Previously presented) The IGBT transistor of claim 21, wherein each of the contacts is respectively connected to a source metallization, to a gate metallization, or a drain metallization.

26. (Previously presented) The IGBT transistor of claim 21, wherein metallizations extend vertically between the source region and the intermediary region to form short-circuits.

27. (Previously presented) The IGBT transistor of claim 21, wherein the insulated conductive fingers are formed at least partially of polysilicon and are insulated by an oxide layer.

28. (Previously presented) The MOS-type power component of claim 15, wherein all of the semiconductor regions extend through the substrate.

29. (Previously presented) The MOS-type power component of claim 15, wherein all of the contacts which contact the semiconductor regions extend through the substrate.

30. (Currently Amended) A MOS-type power component in which semiconductor regions extend perpendicularly to a surface of a semiconductor chip substantially across an entire thickness thereof, wherein contacts with the semiconductor regions are made substantially across the entire thickness of the semiconductor chip by conductive fingers, wherein the MOS-type power component comprises a gate region that extends substantially through an entire thickness of the semiconductor chip.

31. (Previously presented) The component of claim 30, wherein the conductive fingers are metal fingers.

32. (Previously presented) The component of claim 30, wherein junctions or limits between the semiconductor regions are arranged in planes perpendicular to a main chip surface.

33. (Previously presented) The component of claim 30, wherein junctions or limits between the semiconductor regions are formed of several cylinders perpendicular to a main chip surface.

34. (Previously presented) The MOS-type power component of claim 30, further comprising:

a source region of a first conductivity type;

an intermediary region; and

a drain region of the first conductivity type, each of the source, intermediary and drain regions extending across the entire thickness of the semiconductor chip, the source and drain regions being contacted by conductive fingers or plates substantially crossing the substrate;

insulated and spaced apart conductive fingers crossing from top to bottom the intermediary region, a horizontal distance between the insulated fingers being such that the intermediary region can be inverted when a voltage is applied to these insulated conductive fingers.

35. (Previously presented) The MOS-type power component of claim 34, wherein the conductive fingers penetrate into lightly-doped N-type regions and are surrounded with heavily-doped N-type regions.

36. (Previously presented) The MOS-type power component of claim 30, wherein the MOS-type power component is an IGBT transistor, the IGBT transistor comprising:

a source region of a first conductivity type;

an intermediary region;

a drain region of the first conductivity type; and

an additional region of the second conductivity type, wherein each of the source, intermediary, drain and additional regions extend across an entire substrate thickness, the source region and the additional region being contacted by conductive fingers or plates substantially crossing a substrate; and

insulated and spaced apart conductive fingers crossing from top to bottom the intermediary region, a horizontal region between the insulated fingers being such that the intermediary region can be inverted when a voltage is applied to these insulated fingers.

37. (Previously presented) The MOS-type power component of claim 34, wherein each of the conductive fingers is respectively connected to a source metallization, to a gate metallization, or to a drain metallization.

38. (Previously presented) The MOS-type power component of claim 34, wherein localized metallizations extend vertically between the source region and the intermediary region to form localized short-circuits.

39. (Previously presented) The MOS-type power component of claim 34, wherein the insulated and spaced apart conductive fingers are formed in trenches in the semiconductor chip, the

walls of which are oxidized and which are filled with doped polysilicon to form the conductive fingers.

40. (Previously presented) The IGBT transistor of claim 36, wherein each of the conductive fingers is respectively connected to a source metallization, to a gate metallization, or to a drain metallization.

41. (Previously presented) The IGBT transistor of claim 36, wherein localized metallizations extend vertically between the source region and the intermediary region to form localized short-circuits.

42. (Previously presented) The IGBT transistor of claim 36, wherein the insulated and spaced apart conductive fingers are formed in trenches in the semiconductor chip, the walls of which are oxidized and which are filled with doped polysilicon to form the conductive fingers.

43. (Currently Amended) A MOS-type power component, comprising:

a substrate having a first main surface;

<u>a gate region that extends substantially through an entire thickness of the substrate;</u>

a first region and a second region disposed within the substrate such that current flows from the first region to the second region throughout substantially an entire thickness of the substrate, wherein current flow in the first region is substantially parallel to the first main surface; and

contacts extending through the substrate, wherein the first region is contacted within the substrate by at least one of the contacts;

wherein the contacts are metal fingers;

wherein both the first region and the second region extend through the substrate.

44. (Canceled)

45. (Canceled)

46. (Previously presented) The MOS-type power component of claim 43, further comprising:

an interface between the first region and the second region that is arranged as a plane perpendicular to the first main surface.

47. (Previously presented) The MOS-type power component of claim 43, further comprising:

an interface between the first region and the second region that is arranged as a cylinder perpendicular to the first main surface.

48. (Previously presented) The MOS-type power component of claim 43, further comprising:

a source region of a first conductivity type extending through the substrate;

an intermediary region extending through the substrate;

insulated conductive fingers extending through the intermediary region, a spacing between the insulated conductive fingers being such that the conductivity of the intermediary region can be altered when a voltage is applied to the insulated conductive fingers; and

a drain region of the first conductivity type extending through the substrate, the source and drain regions being contacted by at least one of the contacts.

49. (Previously presented) The MOS-type power component of claim 43, wherein the contacts contact heavily-doped N-type regions.

50. (Previously presented) The MOS-type power component of claim 43, wherein the MOS-type power component is an IGBT transistor, the IGBT transistor comprising:

a source region of a first conductivity type extending through the substrate being contacted by at least one of the contacts;

an intermediary region extending through the substrate;

a drain region of the first conductivity type extending through the substrate;

an additional region of the second conductivity type extending through the substrate and being contacted by at least one of the contacts; and

insulated conductive fingers extending through the intermediary region, a spacing between the insulated conductive fingers being such that the conductivity of the intermediary region can be altered when a voltage is applied to the insulated conductive fingers.

51. (Previously presented) The MOS-type power component of claim 48, wherein each of the contacts is respectively connected to a source metallization, a gate metallization, or a drain metallization.

52. (Previously presented) The MOS-type power component of claim 48, wherein localized metallizations extend vertically between the source region and the intermediary region to form localized short-circuits.

53. (Previously presented) The MOS-type power component of claim 48, wherein the insulated conductive fingers are formed at least partially of polysilicon and are insulated by an oxide layer.

54. (Previously presented) The IGBT transistor of claim 50, wherein each of the contacts is respectively connected to a source metallization, to a gate metallization, or a drain metallization.

55. (Previously presented) The IGBT transistor of claim 50, wherein metallizations extend vertically between the source region and the intermediary region to form short-circuits.

56. (Previously presented) The IGBT transistor of claim 50, wherein the insulated conductive fingers are formed at least partially of polysilicon and are insulated by an oxide layer.

57. (Canceled)

58. (Previously presented) The MOS-type power component of claim 43, wherein all of the contacts associated with the MOS-type power component have at least a portion that extends through the substrate.

59. (Previously presented) The MOS-type power component of claim 43, wherein the first region has a first conductivity type and the second region has a second conductivity type.

60. (Currently Amended) The MOS-type power component of claim 1, wherein the [[first]] source region has a first conductivity type and an intermediary ~~the second~~ region has a second conductivity type.

61. (Currently Amended) The MOS-type power component of claim 1, wherein the [[first]] source region has a first conductivity type and the drain ~~second~~ region has the first conductivity type.